

## Chairman's Award - Team 4451

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2019 - Team 4451

**Team Number**

4451

**Team Name, Corporate/University Sponsors**

BOSCH/Bosch Rexroth Corporation/STUEKEN Precision Metal/Michelin/Walmart - Laurens & Laurens District 55 High

**Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2018/2019 year and the preceding two to five years**

Despite our county's high poverty rate and low college-enrollment, our team is providing its students with opportunities seen in high-performing education systems. Our team's STEM programs and sponsors provide students with skills needed for STEM careers, while our team's community service opportunities allow our students to give back to their poor community. Our team allows its students to not only grow as individuals, but also create a noticeable impact on the world around them.

**Describe the impact of the *FIRST* program on your community with special emphasis on the 2018/2019 year and the preceding two to five years**

Our team is changing the culture of our community. Through our organization Robotz and Rozes, we connect women in STEM with girls in our county to inspire and prepare them for the STEM workforce. Our organization Raiders Un;ted is spreading the message of mental health awareness, while Robosportz Life is bringing STEM to special needs students in our community. These, as well as other programs, have brought positive change to our community.

**Team's innovative or creative method to spread the *FIRST* message**

The Garage's many outreach sub-teams allow us to cast a wide net across the county and beyond. Our two biggest sub-teams are Robosports L.I.F.E. and Robotz and Rozes. Robosports L.I.F.E allows us to spread our FIRST message to the special-needs students in our community, while Robotz and Rozes inspires girls in our county to join FIRST programs. These are just some of our many sub-teams. By dividing everything into small student-led teams, we are able to maximize our reach and impact.

**Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate**

The team's many FIRST teams are all trained and guided towards self-sustainability by our team. We also host an FLL event to help prepare FLL students in our area for competitions. Our team's belief in making STEM available to everyone also pushes the Girls of the Garage to inspire younger female generations to join FIRST.

**Describe the team's initiatives to help start or form other FRC teams**

In 2016, our team expanded from FRC Team 4451 into a multi-team organization known as Rat Rodz Robotics. We created Team 6366 RamRodz and began to assist them through the development and adjustment stage. Now, they have entered the sustainability stage and have begun to work with us as equals. We share mentors, the workshop, supplies, and scouting data with Hillcrest H.S. (our rival in athletics). Currently, we are beginning to create a team at Clinton High School.

**Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)**

The team started and mentors the four FLL team in our district, and began the organization Rat Rodz Robotics to expand our reach. Currently, the team is in communications with our sister district and is preparing to create an FRC team there. We are also preparing to launch 6 new Jr. FLL teams at each of our elementary schools this fall.

**Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program**

We mentor the FLL Teams in our country by going to the middle schools to help train the students on strategy, robot design, and programming. Robotz Garage also hosts the FIRST event "Veterans Valor Challenge Academy" to help local teams prepare for the upcoming FLL season. The team also provided FRC Team RamRodz Robotics with training and materials until this year. Currently, the team's share several mentors and work together as equals.

**Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)**

Robotz Garage has worked with the four FLL teams in our district to run the Veterans Valor Challenge Academy. We share our shop and mentors with FRC Team 6366. Robotz Garage also helps other FRC teams at competitions with programming, mechanical, and electrical issues.

**Describe your Corporate/University Sponsors**

We have multiple sponsors with which we have a close relationship that ensures long-lasting partnerships. Bosch Rexroth and Stuken provide us with mentors, robot transportation, and tools. We also hold sponsorships with other organizations, including Ingersoll Rand and Palmetto Air Solutions. Sponsors such as these help pay for outreach materials, provide mentors and transportation to events, and provide other team expenses throughout the year.

**Describe the strength of your partnership with your sponsors with special emphasis on the 2018/2019 year and the preceding two to five years**

Our strong partnership with our sponsors provides us with a mutually beneficial relationship that will last for years to come. We worked with Bosch to add FRC Team 6366 and to create the multi-team organization Rat-Rod Robotics, and collaborate with Michelin every year for our STEM Camp and STEM Challenge. Our STEM sponsors gives job opportunities to alumni through apprenticeship programs. Currently, 34% of our alumni enter an apprenticeship.

**Describe how your team would explain what *FIRST* is to someone who has never heard of it**

FIRST is granting future generations the ability to maneuver the world in which they live. The organization allows students to learn important technical and manufacturing skills used in STEM fields. The organization also provides its students with necessary communication and teamwork skills, granting them the social tools needed to succeed in the workplace. By providing its students with these skills, FIRST is giving its students the ability to thrive in the Information Age.

**Briefly describe other matters of interest to the *FIRST* judges, if any****Team Captain/Student Representative that has double-checked this submission.**

Marissa Wideman

## Essay

### CHANGING THE WORLD STARTS WITH A TEAM

The spirit of The Garage has lived far longer than the team. Jim Bryan, the father of our founder and lead mentor Mike Bryan, had a workshop in his garage where he mentored young teens from his neighborhood. Jim gave the kids a safe place to explore and allowed them to work and learn how to repair Indian Motorcycles. Inspired by his father's impact on children in the sixties, Mike Bryan founded our team decades later in 2012. At the time, Mr. Bryan could not have predicted the spark he had just lit, or the wildfire of change it would grow into.

The team, located in the poor county of Laurens, has become a beacon of hope in our community. Living in a place with a 72% poverty rate, the team has made it its mission to fight against the constraints of poverty within our community. Although difficult, the team has improved the quality of life for its students and has inspired them to push past the limitations of poverty and become successful.

### IT STARTS WITH A SPONSOR

The building blocks of our team lie with our sponsors. With their support, the team is able to support itself and develop a connection between industry leaders and students. The mentors from these sponsors make it their mission to connect with our students and teach them to become self-sufficient and confident.

Because many students lack the necessary tools to succeed in the workplace, the mentors from our sponsors grant them the skills necessary to enter the STEM workforce. Along with training, our sponsors provide our students with the opportunity to gain both a job and an education through an apprenticeship. This apprenticeship grants our students financial stability and the path to education, both of which are difficult things to achieve for students from our county. Not only do 34% of our alumni enter one of these apprenticeships, but most of these alumni are able to afford a house within three to four years of entering the apprenticeship as well.

### IT STARTS WITH A CAMP

Our first community outreach event occurred in 2013 with our STEM Camp. The camp began as a small workshop with a few children from within the county. Now, the camp is a four-day event that averages over 125 campers from across the state. Seeing the positive impact the STEM Camp has had on its campers, the Garage decided to do more.

Seeing the way female campers loved the STEM Camp, the team founded the organization Robotz and Rozes. This organization brings female speakers into the community to inspire young women to join STEM programs and seek a career in STEM education. Along with our STEM Camp, our team hoped to bring the joy of STEM to special needs students. This hope turned into the organization Robospotz L.I.F.E. Robospotz L.I.F.E. is an organization sponsored by Clemson University and started by our team to bring STEM activities to self-contained students within our school. Currently, both organizations are thriving and spreading the message of FIRST and STEM.

Our other partnerships include our partnership with the Laurens County Empowerment Center and the After-School programs at our other schools within the district. Our partnership with the LCEC provides low-income and at-risk students with the opportunity to join a STEM program. The partnership with the After-School programs also allow us to provide even more STEM activities to the children in our county.

Most recently, we have created the outreach initiatives Raiders United and Robotics United. After the loss of two peers, the team decided to create initiatives dedicated to spreading mental health awareness to other teams and within the community. Through campaigns, assemblies, and most importantly conversation; our team is determined to help end the stigma surrounding mental health. The team is also creating a scholarship for students in our county that are planning to enter the psychology field.

Our team's goals for outreach also include acts of community service. This year alone, our toy drive increased its donated toy amount from 1000 to 1200. Our other main service event, Reading at The Ridge, donated hundreds of filled book bags to students in need. The team also holds many other community service projects, including events such as food drives and hurricane relief.

### IT STARTS WITH SOME GROWTH

Having seen the success of our outreach events, the team began to expand the FIRST program within our district. The team created four FLL teams at each of our middle schools, providing them with the necessary mentoring and financial support to compete. The Garage helped them develop into teams, and then slowly gave them the space necessary to become self-sufficient. Having entered the sustainability stage of our team-founding process, the FLL teams serve as our partners in bringing FIRST into the county.

**Essay - page 2**

Although we are partners, the Garage acknowledges the importance of student mentorship still provides the FLL teams with mentors. The Garage and FLL teams also host an FLL Challenge Academy to prepare themselves and other students in the area to compete.

In 2016, the team created the organization RatRodz Robosportz to expand the reach of the FIRST program. The first mission of the organization was to create and sustain a team at Hillcrest High, our athletic rivals. The team, now known as Team 6366 RamRodz, has allowed us to extend the reach of the FIRST program. Having provided them with mentorship, training, supplies, our sister team quickly began to grow. Now, in three short years, they have become completely self-sustainable and have become equal partners in our organization. The team works with us in our shop and shares our mentors and supplies.

Due to the interest of STEM Camp parents, the Garage is also launching two Jr.FLL programs at two elementary schools in our district. If all goes well, we hope to create Jr.FLL programs at each elementary school in the county. The team is also currently preparing to launch a FIRST team in our sister district this fall.

**IT STARTS WITH AN ALUMNI**

Our alumni play a vital role in saving our county. Acknowledging the roles FIRST and the Garage has had on their lives, our alumni return to our county with FIRST fever. These alumni return as community leaders and STEM supporters, changing the culture of our county and making STEM education a forefront of our county.

Currently, 50% of our mentors are alumni. These returning mentors are a sign of not only the impact of our FIRST program on the students in our count, but also the strength of the bond between the students and the FIRST program. These alumni are a sign that we are changing lives and setting people on a path they can follow for life

**CHANGING THE WORLD STARTS IN YOUR OWN BACKYARD**

Our team's ultimate goal is to save our county, and the progress we have made in the past eight years is incredible. Although we have a long way to go, we are not giving up on our home. For the team, changing the world starts with the individuals one helps and the people one touches. For the team, changing the world starts by positively influencing the world around you. Finally, and most importantly, the team believes that changing the world starts in your own backyard.